



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,407	02/15/2002	Jay Jayapalan	CE08888R	3259
22917	7590	10/29/2007		
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			EXAMINER BHATIA, AJAY M	
			ART UNIT	PAPER NUMBER
			2145	
			NOTIFICATION DATE	DELIVERY MODE
			10/29/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.Schaumburg@motorola.com  
APT099@motorola.com

**Office Action Summary**

Application No.

10/077,407

Applicant(s)

JAYAPALAN ET AL.

Examiner

Ajay M. Bhatia

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9/17/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Response to Arguments***

In response to arguments addressing claim 9, restatement of the claim is not sufficient to overcome the present rejection. Applicant merely alleges that the prior art does not teach but does not provide any support for this statement.

Applicant's arguments with respect to claims 1-8 and 15-20 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 and 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Balakrishnan et al. (Improving TCP/IP Performance over Wireless Networks, referred to as impTCP).

For claim 1, impTCP teaches, in a communication system comprising at least two peers that communicate with each other across an intermediate network comprising at least one infrastructure element, a method for an infrastructure element of the at least one infrastructure element to establish communications between two peers of the at least two peers, the method comprising:

Art Unit: 2145

monitoring at least a portion of messages exchanged between the two peers for control messages, wherein the control messages comprise one or more parameters; (impTCP, page 4, 3.1 snoop)

storing at least one of the one or more parameters of the control messages exchanged between the two peers to produce a stored parameters; (impTCP, page 4, 3.1 cache acknowledge)

determining that a received control message is a retransmission of a control message from one of the two peers, wherein the retransmission of the control message will lead to duplicate negotiations between the two peers; and (impTCP, page 4, 3.1 duplicate acknowledgment)

processing the retransmission of the control message and sending a valid proxy response to the sender of the retransmission, wherein the response comprises the stored parameters such that the duplicate negotiations are avoided between the two peers. (impTCP, page 4, page 4 3.1.1, sequence number)

For claim 2, impTCP teaches, the method of claim 1, wherein the control messages comprise point-to-point protocol control messages. (impTCP, page 4, 3.1 TCP)

For claim 3, impTCP teaches, the method of claim 1, wherein the communication system comprises a wireless communication system, the at least two peers comprising at least one wireless communication unit in communication with at least one interworking unit via the intermediate network, and wherein the control message is sent from a wireless communication unit of the at least one wireless communication unit. (impTCP, page 4, 2 wireless network)

For claim 4, impTCP teaches, the method of claim 1, wherein the communication system comprises a wireless communication system, the at least two peers comprising at least one wireless communication unit in communication with at least one interworking unit via the intermediate network, and wherein the control message is sent from an interworking unit of the at least one interworking unit. (impTCP, page 4, 3.1, base station)

For claim 5, impTCP teaches, the method of claim 1, wherein processing of the retransmission of the control message further comprises discarding the retransmission of the control message. (impTCP, page 5, 3.1.1 discard packet)

For claim 6, impTCP teaches, the method of claim 1, wherein processing of the retransmission of the control message further generation of a valid proxy response based on stored parameters. (impTCP, page 5, 3.1.2, snoop ack)

For claim 7, impTCP teaches, the method claim 1, further comprising, prior to detecting the retransmission of the control message:

detecting transmission of data by each of the two peers; and (impTCP, page 4, 3.1 snoop)

discarding the stored parameters in response to detecting the transmission of data by each of the two peers. (impTCP,)

Art Unit: 2145

For claim 8, impTCP teaches, a digital storage device machine-readable medium having stored thereon machine-executable instructions for carrying out the method of claim 1. (impTCP, page 7, 4, ThinkPad)

For claim 15, impTCP teaches, an apparatus for use in an intermediate network forming a part of a communication system, the communication system comprising at least two peers that communicate with each other across the intermediate network, the apparatus comprising:

at least one processor; and (impTCP, page 7, 4, i486)

at least one storage device, coupled to the at least one processor, having stored thereon instructions that, when executed by the at least one processor, cause the at least one processor to: (impTCP, page 7, 4, thinkpad)

monitor at least a portion of messages exchanged between two peers of the at least two peers for control messages, wherein the control message comprise on or more parameters; (impTCP, page 4, 3.1, snoop)

store, in the at least one storage device, at least one parameter of the one or more parameters corresponding to the control messages exchanged between the two peers to produce a stored parameters; (impTCP, page 4, 3.1 cache acknowledge)

determine that a received control message is a retransmission of a control message from one of the two peers, wherein the retransmission of the control message will lead to duplicate negotiations between the two peers; and (impTCP, page 4, 3.1 duplicate acknowledgment)

process the retransmission of the control message and send a valid proxy response to the sender of the retransmission that comprises the stored parameters, such that the duplicate

Art Unit: 2145

negotiations are avoided between the two peers. (impTCP, page 4, page 4 3.1.1, sequence number)

For claim 16, impTCP teaches, the apparatus of claim 15, wherein the control messages comprise point-to-point protocol control messages. (impTCP, page 4 3.1, tcp)

For claim 17, impTCP teaches, the apparatus of claim 15, wherein the at least one storage device further comprises instructions that, when executed by the at least one processor, cause the at least one processor to:

process the retransmission of the control message by discarding the retransmission of the control message. (impTCP, page 5, 3.1.1 discard packet)

For claim 18, impTCP teaches, the apparatus of claim 15, wherein the at least one storage device further comprises instructions that, when executed by the at least one processor, cause the at least one processor to:

process the retransmission of the control message by generation of a valid proxy response based on stored parameters. (impTCP, page 4, 3.1 duplicate acknowledgment, page 4, 3.1.1, snoop data)

For claim 19, impTCP teaches, a base station controller embodying the apparatus of claim 15. (impTCP, page 4 3.1, base station)

Art Unit: 2145

For claim 20, impTCP teaches, a mobile switching center embodying the apparatus of claim 15.

(impTCP, page 4, 3.1 base station)

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 9, 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Liao et al.

(U.S. Patent 6,606,663).

For claim 9. In a communication system comprising at least two peers that communicate with each other across an intermediate network comprising at least one infrastructure element, a method for an infrastructure element of the at least one infrastructure element to establish communications between a first peer and a second peer of the at least two peers, the method comprising:

receiving, from the first peer, a request control message targeted to the second peer;

(Liao, )



Art Unit: 2145

forwarding the request control message to the second peer; (Liao, Col. 8 lines 24-42, credential )

receiving from the second peer, a response to the request control message; (Liao, Col. 8 lines 24-42, new credential)

storing at least one parameter from the response to the request control message to produce a stored parameter; (Liao, Col. 8 lines 24-42, credential)

receiving, from the first peer, a retransmission of the request control message targeted to the second peer; and (Liao, Col. 8 lines 24-42, credential)

processing the retransmission of the request control message and sending a valid proxy response to the first peer comprising the stored parameters. (Liao, Col. 8 lines 24-42, credential, Col. 8 lines 42-63, automatic insert)

For claim 11, Liao teaches, the method of claim 9, wherein processing of the retransmission of the control message further comprises discarding the retransmission of the control message. (Liao, Col. 7 lines 25-40, authentication, Col. 12 lines 7-23, removed)

For claim 12, Liao teaches, the method of claim 9, wherein processing of the retransmission of the control message further comprises generation of a valid proxy response based on stored control message parameters. (Liao, Col. 8 lines 42-63, automatic insert)

For claim 13, Liao teaches, the method of claim 9, further comprising, prior to receiving the retransmission of the first request control message:

Art Unit: 2145

detecting transmission of data by each of the first peer and the second peer; and (Liao, Col. 7 lines 25-40, authentication)

discarding the stored request control message parameters in response to detecting the transmission of data by the first peer and the second peer. (Liao, Col. 7 lines 25-40, authentication, Col. 12 lines 7-23, removed)

For claim 14, Liao teaches, a digital storage device having stored thereon computer-executable instructions for carrying out the method of claim 9. (Liao, Col. 4 lines 12-34, PC)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liao et al. (U.S. Patent 6,606,663). (Improving TCP performance over multi-slot GSM used for motivation)

For claim 10, Liao fails to teaches, the method of claim 9, wherein the control messages comprise point-to-point protocol control messages.

PPP is compatible with Liao because it is commonly used in wireless networks

PPP is protocol using in the field of Liao invention.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to make use of point to point protocol (PPP) because it is commonly used in conjunction with GSM communication. (Liao, Col. 3 line 62 to Col. 4 line 10, cdpd, gsm, Col. 5 lines 1-5, TCP) "Improving TCP performance over multi-slot GSM" provides additional motivation to implement PPP with GSM specifically for fixed host and mobile host (two clients). ("Improving TCP performance over multi-slot GSM", pg 330, sub heading IV IP Traffic Flow & Bandwidth Consideration in the Testbed)

Claims 10 and 16 are rejected for similar reasons.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached Notice of references cited (if appropriate).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2145

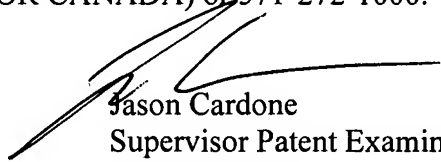
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ajay M. Bhatia whose telephone number is (571)-272-3906. The examiner can normally be reached on M-F 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571)272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AB  
AB

  
Jason Cardone  
Supervisor Patent Examiner  
Art Unit 2145